European Journal of Vascular and Endovascular Surgery 43 (2012) 661

Contents lists available at SciVerse ScienceDirect

European Journal of Vascular and Endovascular Surgery

journal homepage: www.ejves.com

Invited Commentary

Commentary on 'Development of Off-the-shelf Stent Grafts for Juxtarenal Abdominal Aortic Aneurysms'

D.J. Adam [a,*], E.L.G. Verhoeven [b]

[a] University Department of Vascular Surgery, Heart of England NHS Foundation Trust, Birmingham B9 5SS, Birmingham, UK
[b] Department of Vascular and Endovascular Surgery, Klinikum Nurnberg, Nurnberg, Germany

The paper in this month's journal from Resch, Haulon and colleagues describes the first clinical experience using a pre-loaded fenestrated aortic stent-graft with pivot renal fenestrations in patients with complex abdominal aortic aneurysms (AAA). Regulatory issues required the endografts to be customised, but the paper clearly demonstrates the feasibility of Cook Medical's (Bloomington, Indiana) proposed 'off-the-shelf' fenestrated device. From a technical perspective, there are potential benefits associated with the novel pre-loaded pivot renal fenestrations. For example, in angulated necks, alignment of the fenestrations with the renal arteries may not be so crucial, the pivot fenestrations behaving like short cuffs and giving the clinician some room to manoeuvre. Unlike Cook's device which has three fenestrations for the superior mesenteric artery and both renal arteries, Endologix (Irvine, California) has developed an 'off-the-shelf' fenestrated device with two renal fenestrations and a scallop for the visceral vessels. While both manufacturers claim that the majority of short-necked and juxtarenal AAA can be treated using their graft, the triple fenestrated platform should be more versatile and allow the treatment of some suprarenal aneurysms as well. Specialist aortic units will likely have access to both double and triple fenestrated platforms allowing the treatment to be tailored to the patient and the aneurysm, thereby avoiding the unnecessary implantation of a complex endograft where a simpler device will suffice.

The principal limitations to fenestrated endografting have been the time for manufacture, and device costs. These limitations have stimulated interest in chimney grafts and surgeon-modified fenestrated devices. These other approaches may lose some of their popularity provided the costs of the 'off-the-shelf' devices reflect the current economic climate.

An important issue is how this technology should be disseminated to ensure the best possible patient outcomes. It is accepted that a) patients with aortic disease should be offered all the therapeutic options by a multidisciplinary team of specialists, and b) high-volume vascular units deliver better outcomes. Such high volume providers will have the necessary workload to become proficient with these devices in a relatively short period of time, and thus deliver the best possible outcomes for patients. The device manufacturers can make recommendations about the number of cases a centre should perform with a mentor before 'going solo' but they will find it very difficult to decline to sell a device once it is CE-marked. The 'off-the-shelf' technology has been keenly awaited by the vascular community and so it is likely that everyone will want to use it. Commissioners of healthcare, national vascular societies and industry would do well to give this careful consideration; otherwise the technology might fail to deliver its full potential in terms of benefit to patients.

DOI of original article: 10.1016/j.ejvs.2012.01.022.
* Corresponding author.
E-mail address: Donald.Adam@heartofengland.nhs.uk (D.J. Adam).

doi:10.1016/j.ejvs.2012.03.012